3RP-121

XTO ENERGY

Annual Groundwater Remediation Reports

Volume 1

January 2007

XTO ENERGY

RECEIVED

MAR 05 2007

Oil Conservation Division
Environmental Bureau

March 2, 2007

Mr. Glenn von Gonten
Hydrologist-Groundwater Remediation
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Annual Groundwater Remediation Reports

Dear Mr. von Gonten,

XTO Energy Inc. (XTO) is submitting the Annual Groundwater Remediation Reports in accordance with the NMOCD approved Groundwater Management Plan (GMP). Enclosed are summary reports with analytical data, summary tables, site maps, potentiometric surface diagrams and recommendations/proposed actions for:

- Baca Gas Com A #1A 3R0104
- Bruington Gas Com #1 3R0106
- Carson Gas Com #1E 3R415
- EJ Johnson C #1E 3R0385
- Federal Gas Com #H1 3R0110
- Frost, Jack B #2 3R416
- Garcia Gas Com B #1 3R0111
- Haney Gas Com B #1E 3R0113
- Hare Gas Com B #1 3R413
- Hare Gas Com B #1E 3R0384
- Hare Gas Com I #1 3R412
- Masden Gas Com #1E 3R0120
- McDaniel Gas Com B #1E 3R0121
- OH Randel #7 3R0386
- PO Pipken #3E 3R409
- Romero Gas Com A #1 3R0123
- Rowland Gas Com #1 3R124
- Snyder Gas Com #1A 3R0126
- Stedje Gas Com #1 3R0128
- Sullivan Frame A #1A
- Sullivan Gas Com D #1 3R0131
- Valdez A #1E 3R0134

We have also enclosed an Annual Report for one site that meets the closure requirements outlined in the GMP. XTO respectfully requests closure of:

- Abrams J #1 3R0100

In previously submitted reports three sites met the closure requirements outlined in the GMP and XTO requested closure on those sites in January 2006. Per your request reports for the below listed sites are being submitted again.

- Armenta Gas Com #1E 3R0394
- Bergin Gas Com #1E 3R0105
- State Gas Com BS #1 3R0127

Thank you for your review of the reports. XTO looks forward to hearing from you regarding closure requests and proposed remediation actions. If you have any questions please do not hesitate to contact me at (505) 566-7942.

Respectfully,

Lisa Winn
Environmental Coordinator
San Juan Division

cc: Mr. Brandon Powell, Environmental, NMOCD District III Office, Aztec, NM
Mr. Martin Nee, Lodestar Services Inc.
File- San Juan Groundwater

McDANIEL GC #1E

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2006

McDANIEL GAS COM B #1E
(F) SECTION 26 – T29N – R10W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
MR. GLENN VON GONTEN
NEW MEXICO OIL CONSERVATION DIVISION

January 2007

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Table 1: Summary Groundwater Laboratory Results

Figure 1: Site Map

Figures 2-3: Potentiometric Surface Diagrams

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Attachment 1: 2006 Laboratory Reports

Attachment 2: Pit Closure Report (12/94)

2006 XTO GROUNDWATER REPORT

McDANIEL GAS COM B #1E

SITE DETAILS

Legals - Twn: 29N **Rng:** 10W **Sec:** 26 **Unit:** F
NMOCD Hazard Ranking: 40 **Land Type:** FEE

PREVIOUS ACTIVITIES

Excavation: Dec-94 (50 CY) **Soil Boring:** Oct-99 **Monitor Wells:** Oct-99

SITE MAP

A site map is presented as Figure 1.

SUMMARY TABLES

A summary of groundwater analytical results is presented as Table 1. The laboratory reports and associated quality assurance/quality control data for 2006 are presented as Attachment 1.

POTENTIOMETRIC SURFACE DIAGRAMS

Site monitoring has indicated a groundwater gradient that trends towards the west (Figures 2 and 3).

2006 ACTIVITIES

Annual Groundwater Remediation Report- The 2005 annual groundwater report was submitted to New Mexico Oil Conservation Division (NMOCD) in April 2006, proposing quarterly sampling of the groundwater monitor wells, in accordance with the NMOCD approved Groundwater Management Plan.

Groundwater Monitoring – Groundwater samples were collected for three quarters in 2006 from monitoring wells MW-1 through MW-3. Laboratory analytical results indicate groundwater has been below standards for each of the three quarters at this site.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Bore/Test Hole Reports are presented are presented as Figures 3-5 representing drilling that occurred on site in September 1999.

DISPOSITION OF GENERATED WASTES

Waste generated (groundwater) during monitor well sampling and development was placed in the produced water separator tank located on the well site.

CONCLUSIONS

In January 1998 XTO Energy Inc. (XTO) acquired the McDaniel Gas Com B #1E from Amoco Production Company. XTO understands the initial groundwater assessment came from samples collected from the bottom of the earthen pit following excavation of impacted soils. Laboratory analysis of the initial sample indicated the presence of elevated dissolved phase benzene, toluene, ethyl benzene and total xylenes (BTEX) constituents. In 1999 three groundwater monitoring wells were installed to delineate the extent of hydrocarbon impacts to groundwater. Monitoring well numbered MW-2 was installed near the center of the source area (closed and backfilled earthen dehydrator pit).

Monitoring wells numbered MW-1 and MW-3 were placed down gradient of the source area. Groundwater samples collected from the three groundwater monitoring wells indicated BTEX constituents were not present above the detection limits of the laboratory equipment (0.2 ug/L). Sampling was terminated and the site was submitted for closure.

Correspondence from NMOCD in 2000 requested four consecutive quarters of testing in compliance with XTO's Groundwater Management Plan was required. Analytical data from MW-1, MW-2, and MW-3 for three quarters in 2006 have demonstrated no detectable levels of BTEX constituents. The monitoring wells will be sampled during the first quarter of 2007 and XTO anticipates submitting this site for closure following completion of four (4) consecutive quarters.

RECOMMENDATIONS

- Quarterly sampling will continue at all monitor wells until analytical results show hydrocarbon constituents are below New Mexico groundwater standards for four (4) consecutive quarters.
- Following OCD approval for closure, all monitor well locations will be abandoned in accordance with the monitoring well abandonment plan.

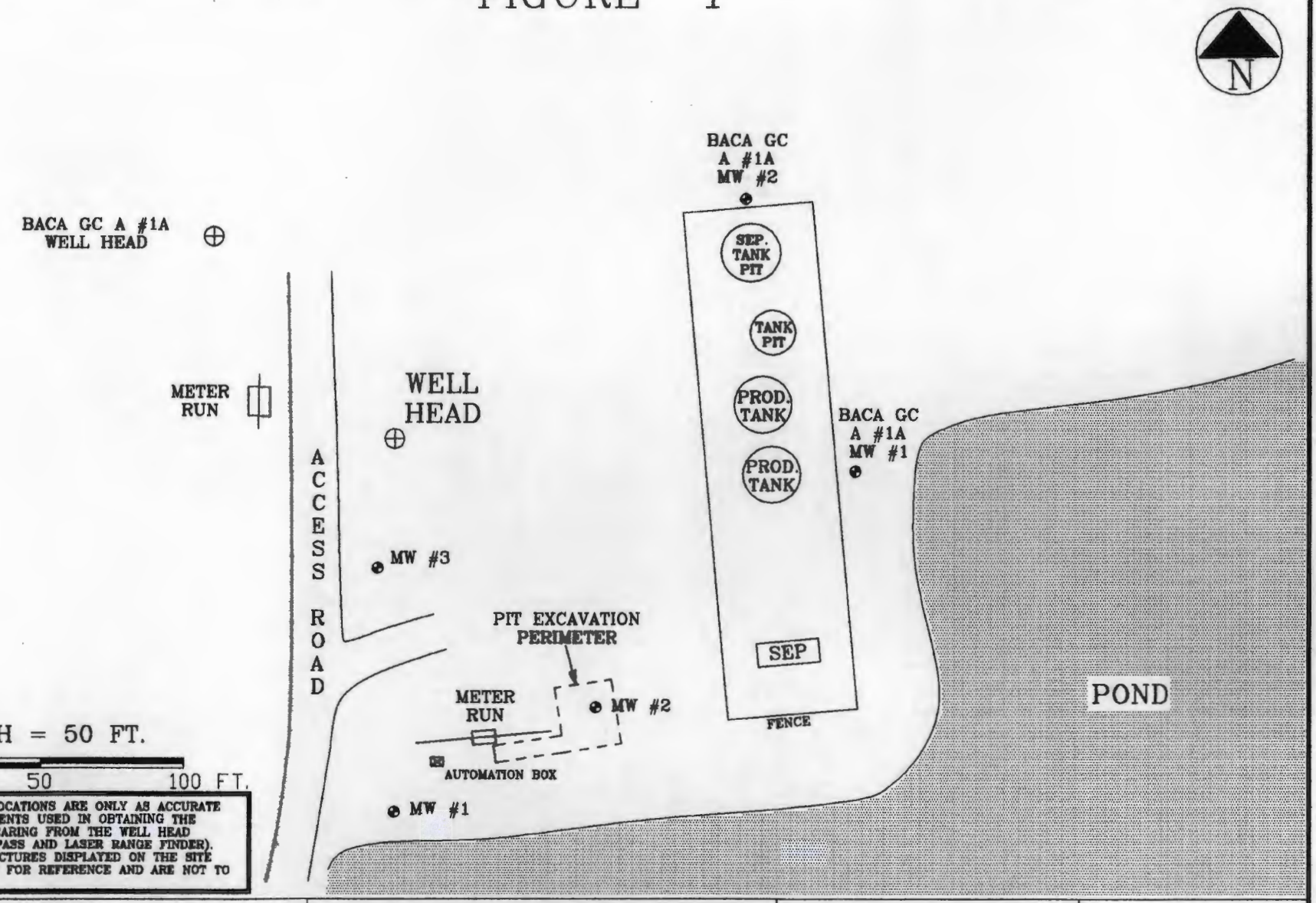
TABLE 1
XTO ENERGY INC. GROUNDWATER LAB RESULTS

McDANIEL GC B #1E- DEHY. PIT
UNIT F, SEC. 26, T29N, R10W

Revised Date: February 1, 2007

Sample Date	Monitor Well No.	DTW (ft)	TD (ft)	Product (ft)	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Total Xylene ug/L
28-Oct-99	MW #1	4.04	14		ND	ND	ND	ND
20-Jun-06			3.7		DRY WELL			
25-Sep-06		5.02	12.01		ND	ND	ND	ND
5-Dec-06		4.22	12.01		ND	ND	ND	ND
28-Oct-99	MW #2	3.49	13		ND	ND	ND	ND
20-Jun-06		5.09	13.3		ND	ND	ND	ND
25-Sep-06		5.27	13.22		ND	ND	ND	ND
5-Dec-06		3.88	13.22		ND	ND	ND	ND
28-Oct-99	MW #3	1.82	12.12		ND	ND	ND	ND
20-Jun-06		3.7	11.85		ND	ND	ND	ND
25-Sep-06		1.16	12.94		ND	ND	ND	ND
5-Dec-06		2.67	12.94		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS					10	750	750	620

FIGURE 1



XTO ENERGY INC.

McDANIEL GC B #1E

SE/4 NW/4 SEC. 26, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

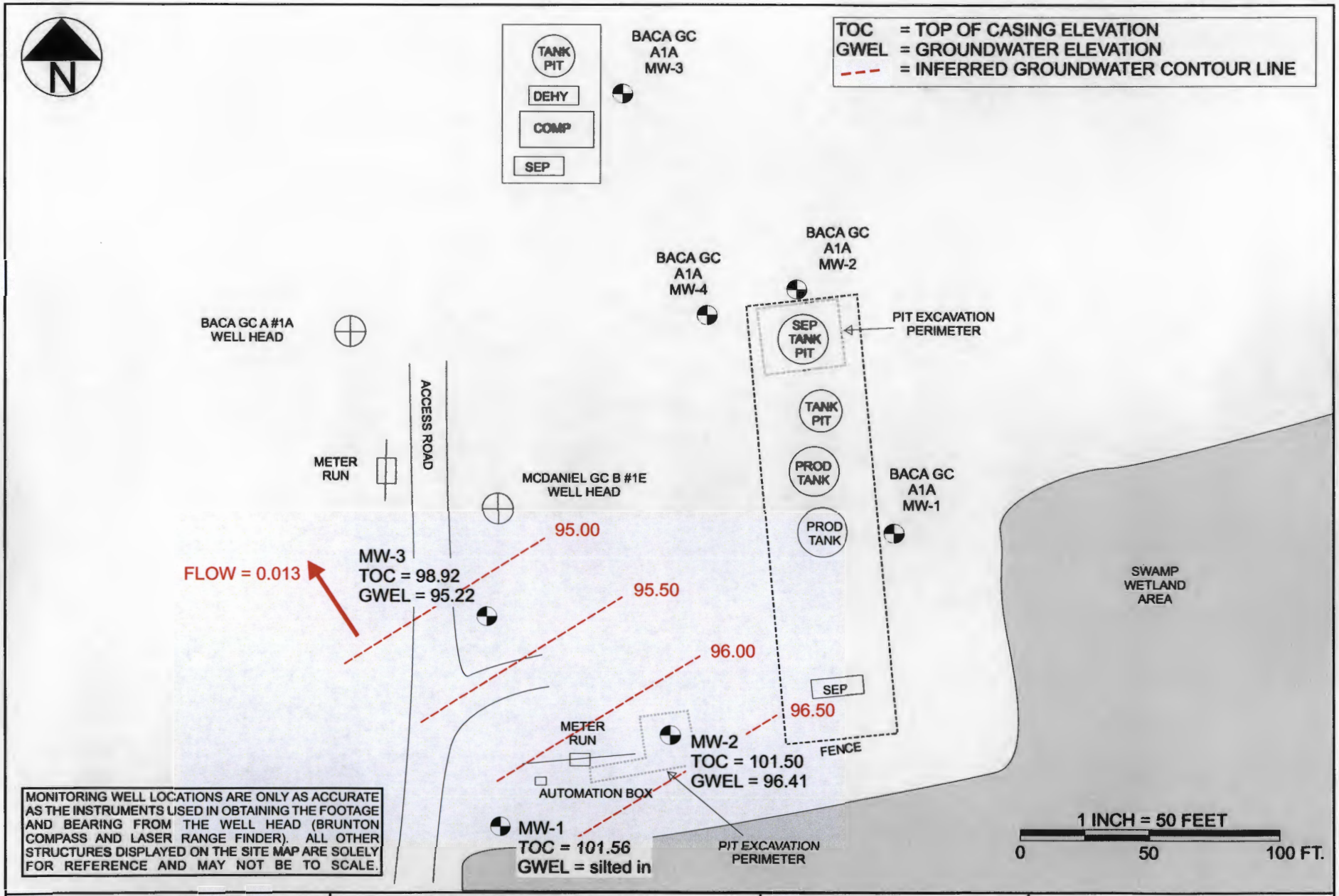
PROJECT: MW INSTALL.

DRAWN BY: NJV

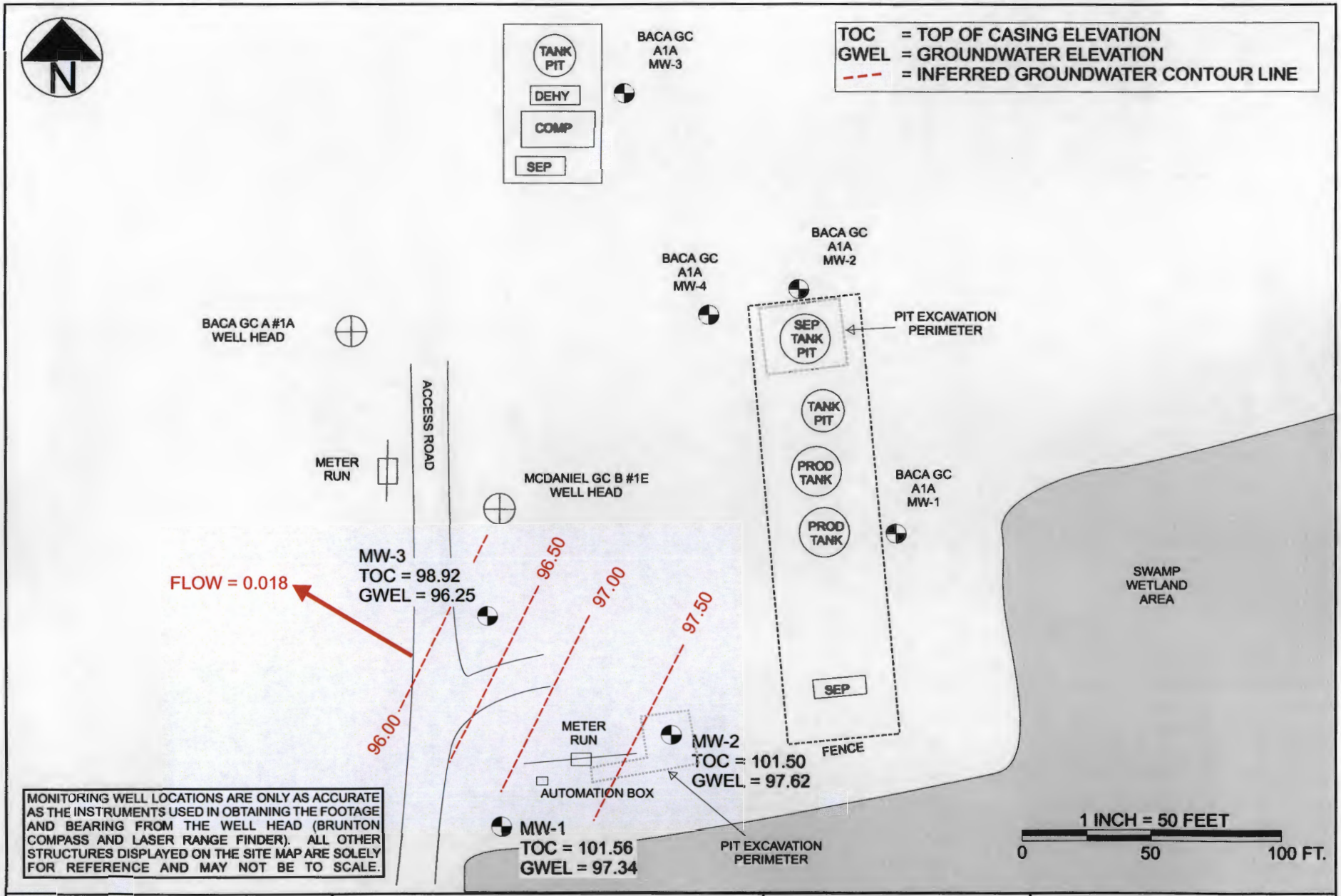
FILENAME: McDAN-SM.SKD

SITE MAP

10/99



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	MCDANIEL GC B1E SE/4 NW/4 SEC. 26, T29N, R10W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 12/09/06	FIGURE 2 GROUNDWATER GRADIENT MAP 06/20/2006



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	MCDANIEL GC B1E SE/4 NW/4 SEC. 26, T29N, R10W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 12/09/06	FIGURE 3 GROUNDWATER GRADIENT MAP 12/05/2006

FIGURE 4

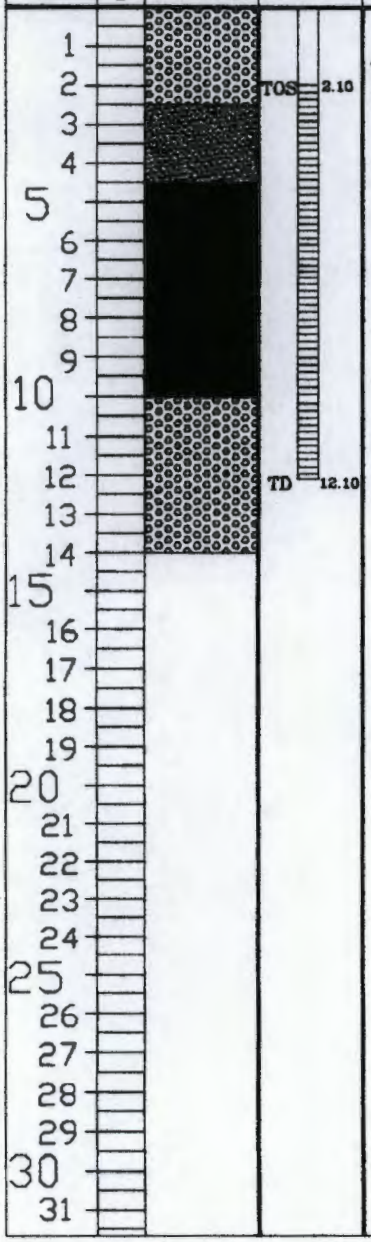
BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

BORING # ..... BH - 1
MW # 1
PAGE # 1
DATE STARTED 10/12/99
DATE FINISHED 10/12/99
OPERATOR ..... DE
PREPARED BY NJV

CLIENT: XTO ENERGY INC.
LOCATION NAME: McDANIEL GC B #1E
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 132 FT., DUE SOUTH FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.90 FT. ABOVE GROUND SURFACE.

▼ GW DEPTH ON 10/28/99 = 2.14 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH ORANGE SAND AND GRAVEL, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.00 – 2.50 FT. INTERVAL).

OLIVE GRAY SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (2.50 – 4.50 FT. INTERVAL).

DARK GRAY TO BLACK SAND, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (4.50 – 10.00 FT. INTERVAL).

LIGHT GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (10.00 – 14.00 FT. INTERVAL).

NOTE:
- – SAND.
- – SAND (DISCOLORED).
- – SAND AND GRAVEL.

TOS – TOP OF SCREEN FROM GROUND SURFACE.
TD – TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW – GROUND WATER.

DRAWING: BH-1.SKD	DATE: 1/19/00	DWN BY: NJV

FIGURE 5

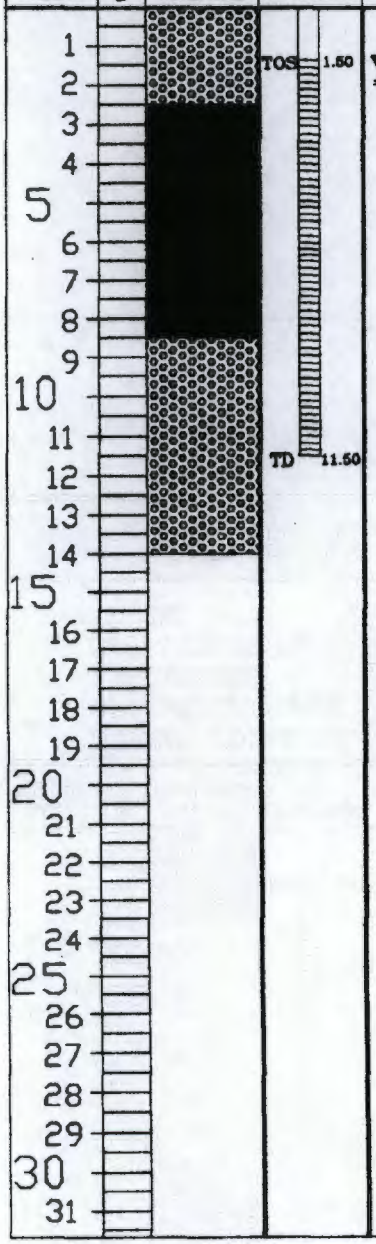
BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

BORING # BH - 2
MW # 2
PAGE # 2
DATE STARTED 10/12/99
DATE FINISHED 10/12/99
OPERATOR DE
PREPARED BY NJV

CLIENT: XTO ENERGY INC.
LOCATION NAME: McDANIEL GC B #1E
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 118 FT., S36.5E FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.50 FT. ABOVE GROUND SURFACE.

GW DEPTH ON 10/28/99 = 1.99 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH ORANGE SAND AND GRAVEL, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.00 - 2.50 FT. INTERVAL).

DARK GRAY TO BLACK SAND, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (2.50 - 8.50 FT. INTERVAL).

LIGHT GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (8.50 - 14.00 FT. INTERVAL).

NOTE:
- SAND (DISCOLORED).
- SAND AND GRAVEL.
- TOS - TOP OF SCREEN FROM GROUND SURFACE.
- TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
- GW - GROUND WATER.

DRAWING: BH-2.SKD	DATE: 1/19/00	DWN BY: NJV

FIGURE 6

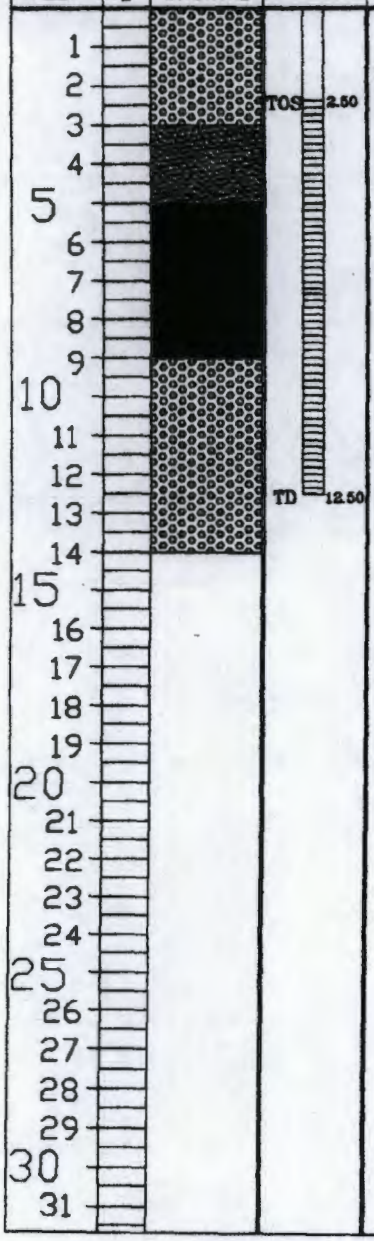
BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

BORING # ..... BH - 3
MW # 3
PAGE # 3
DATE STARTED 10/12/99
DATE FINISHED 10/12/99
OPERATOR ..... DE
PREPARED BY NJV

CLIENT: XTO ENERGY INC.
LOCATION NAME: McDANIEL GC B #1E
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 46 FT., S7.5W FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 0.38 FT. BELOW GROUND SURFACE.

▼ GW DEPTH ON 10/28/99 = 2.20 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH ORANGE SAND AND GRAVEL, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.00 - 3.00 FT. INTERVAL).

OLIVE GRAY SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (3.00 - 5.00 FT. INTERVAL).

DARK GRAY TO BLACK SAND, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (5.00 - 9.00 FT. INTERVAL).

LIGHT GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (9.00 - 14.00 FT. INTERVAL).

NOTE:
- SAND.
- SAND (DISCOLORED).
- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.

DRAWING: BH-3.SKD | DATE: 1/19/00 | DWN BY: NJV

Hall Environmental Analysis Laboratory, Inc.

Date: *28-Jun-06*

CLIENT: XTO Energy
Project: Groundwater - McDaniel Gas ComB#1E
Lab Order: 0606232

Lab ID: 0606232-01 **Collection Date:** 6/20/2006 11:42:00 AM
Client Sample ID: McDaniel Gas ComB#1E MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	6/23/2006 3:33:07 AM
Toluene	ND	1.0		µg/L	1	6/23/2006 3:33:07 AM
Ethylbenzene	ND	1.0		µg/L	1	6/23/2006 3:33:07 AM
Xylenes, Total	ND	3.0		µg/L	1	6/23/2006 3:33:07 AM
Surr: 4-Bromofluorobenzene	85.3	72.2-125		%REC	1	6/23/2006 3:33:07 AM

Lab ID: 0606232-02 **Collection Date:** 6/20/2006 12:50:00 PM
Client Sample ID: McDaniel Gas ComB#1E MW-2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	6/23/2006 4:02:11 AM
Toluene	ND	1.0		µg/L	1	6/23/2006 4:02:11 AM
Ethylbenzene	ND	1.0		µg/L	1	6/23/2006 4:02:11 AM
Xylenes, Total	ND	3.0		µg/L	1	6/23/2006 4:02:11 AM
Surr: 4-Bromofluorobenzene	86.4	72.2-125		%REC	1	6/23/2006 4:02:11 AM

Lab ID: 0606232-03 **Collection Date:** 6/20/2006 7:00:00 AM
Client Sample ID: 200606TB02 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	6/23/2006 4:31:21 AM
Toluene	ND	1.0		µg/L	1	6/23/2006 4:31:21 AM
Ethylbenzene	ND	1.0		µg/L	1	6/23/2006 4:31:21 AM
Xylenes, Total	ND	3.0		µg/L	1	6/23/2006 4:31:21 AM
Surr: 4-Bromofluorobenzene	81.3	72.2-125		%REC	1	6/23/2006 4:31:21 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Groundwater - McDaniel Gas ComB#1E **Work Order:** 0606232

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									Batch ID: R19665
Sample ID: 5ML RB		*MBLK*							Analysis Date: 6/22/2006
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS		*LCS*							Analysis Date: 6/22/2006
Benzene	18.63	µg/L	1.0	93.2	85	115			
Toluene	17.48	µg/L	1.0	87.4	85	116			
Ethylbenzene	17.83	µg/L	1.0	89.2	85	116			
Xylenes, Total	55.30	µg/L	3.0	92.2	85	119			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date and Time Received: 6/22/2006

Work Order Number 0606232 | Received by AT

Checklist completed by _____ 6/22/06
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 4° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA/QC Package: Std ☒ Level 4 ☐
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: Kim Champlin
XTO Energy

Address: 2700 Farmington Ave
Bldg K, Ste 1
Farmington, NM 87401

Phone #: 505-566-7954
Fax #:

Project Name: Ground Water
Project #:
Project Manager: Lisa Winn
Sampler: Martin Nee
Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative HCl	HEAL No.
06-20-06	11:42	GW	McDaniel Gas Com B #1E MW3				✓	606232-1
06-20-06	12:50	GW	McDaniel Gas Com B #1E MW2				✓	-2
06-20-06	07:00	water	20060TB02				✓	3

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	802D BTEX				Air Bubbles or Headspace (Y or N)
												✓				
												✓				
												✓				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
6/21/06	0720		6/22/06 1615
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Oct-06*

CLIENT:	XTO Energy	**Client Sample ID:**	McDaniel Gas Com B1E MW-1
Lab Order:	0609347	**Collection Date:**	9/25/2006 12:57:00 PM
Project:	XTO Groundwater	**Date Received:**	9/27/2006
Lab ID:	0609347-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/5/2006 3:09:36 PM
Toluene	ND	1.0		µg/L	1	10/5/2006 3:09:36 PM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2006 3:09:36 PM
Xylenes, Total	ND	3.0		µg/L	1	10/5/2006 3:09:36 PM
Surr: 4-Bromofluorobenzene	97.3	72.2-125		%REC	1	10/5/2006 3:09:36 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Oct-06*

CLIENT:	XTO Energy	**Client Sample ID:**	McDaniel Gas Com B1E MW-2
Lab Order:	0609347	**Collection Date:**	9/25/2006 12:32:00 PM
Project:	XTO Groundwater	**Date Received:**	9/27/2006
Lab ID:	0609347-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/5/2006 1:22:19 AM
Toluene	ND	1.0		µg/L	1	10/5/2006 1:22:19 AM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2006 1:22:19 AM
Xylenes, Total	ND	3.0		µg/L	1	10/5/2006 1:22:19 AM
Surr: 4-Bromofluorobenzene	90.0	72.2-125		%REC	1	10/5/2006 1:22:19 AM

Qualifiers:

- `*` Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Oct-06*

CLIENT:	XTO Energy	**Client Sample ID:**	McDaniel Gas Com B1E MW-3
Lab Order:	0609347	**Collection Date:**	9/25/2006 1:40:00 PM
Project:	XTO Groundwater	**Date Received:**	9/27/2006
Lab ID:	0609347-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/5/2006 1:51:16 AM
Toluene	ND	1.0		µg/L	1	10/5/2006 1:51:16 AM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2006 1:51:16 AM
Xylenes, Total	ND	3.0		µg/L	1	10/5/2006 1:51:16 AM
Surr: 4-Bromofluorobenzene	93.5	72.2-125		%REC	1	10/5/2006 1:51:16 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Oct-06*

CLIENT:	XTO Energy	**Client Sample ID:**	25092006TB01
Lab Order:	0609347	**Collection Date:**	
Project:	XT0 Groundwater	**Date Received:**	9/27/2006
Lab ID:	0609347-11	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/5/2006 6:16:33 AM
Toluene	ND	1.0		µg/L	1	10/5/2006 6:16:33 AM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2006 6:16:33 AM
Xylenes, Total	ND	3.0		µg/L	1	10/5/2006 6:16:33 AM
Surr: 4-Bromofluorobenzene	97.5	72.2-125		%REC	1	10/5/2006 6:16:33 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XT0 Groundwater **Work Order:** 0609347

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID: R20938		Analysis Date: 10/4/2006 11:00:33 AM		
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID: R20958		Analysis Date: 10/5/2006 10:03:16 AM		
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID: R20938		Analysis Date: 10/4/2006 9:28:27 PM		
Benzene	20.90	µg/L	1.0	105	85	115			
Toluene	20.64	µg/L	1.0	103	85	118			
Ethylbenzene	20.83	µg/L	1.0	104	85	116			
Xylenes, Total	63.36	µg/L	3.0	106	85	119			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID: R20958		Analysis Date: 10/5/2006 1:42:53 PM		
Benzene	20.96	µg/L	1.0	105	85	115			
Toluene	20.53	µg/L	1.0	103	85	118			
Ethylbenzene	20.82	µg/L	1.0	104	85	116			
Xylenes, Total	63.12	µg/L	3.0	105	85	119			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID: R20958		Analysis Date: 10/5/2006 9:31:35 PM		
Benzene	21.14	µg/L	1.0	106	85	115	0.855	27	
Toluene	20.72	µg/L	1.0	104	85	118	0.892	19	
Ethylbenzene	20.79	µg/L	1.0	104	85	116	0.173	10	
Xylenes, Total	63.10	µg/L	3.0	105	85	119	0.0317	13	
Method: SW7470									
Sample ID: 0609347-04A msd		*MSD*			Batch ID: 11395		Analysis Date: 9/27/2006		
Mercury	0.005070	mg/L	0.00020	101	75	125	7.36	20	
Sample ID: MB-11395		*MBLK*			Batch ID: 11395		Analysis Date: 9/27/2006		
Mercury	ND	mg/L	0.00020						
Sample ID: LCS-11395		*LCS*			Batch ID: 11395		Analysis Date: 9/27/2006		
Mercury	0.005070	mg/L	0.00020	101	80	120			
Sample ID: 0609347-04A ms		*MS*			Batch ID: 11395		Analysis Date: 9/27/2006		
Mercury	0.004710	mg/L	0.00020	94.2	75	125			

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date and Time Received: 9/27/2006

Work Order Number 0609347 | Received by AT

Checklist completed by _____ 9/27/06
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☐	No ☑		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐	

Container/Temp Blank temperature? 2° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA/QC Package: Std ☒ Level 4 ☐
Other:

Client: Kim Champlin
XTO Energy

Address: 2700 Farmington Ave
Bldg. I Ste K
Farmington, NM

Phone #: 505 - 566-7954

Fax #:

Project Name: XTO Ground Water

Project #:

Project Manager: Lisa Winn

Sampler: ALA

Sample Temperature: 4° 2 Ar

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
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www.hallenvironmental.com

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative HCl	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_2, NO_3, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 B BTEX	Mercury	Temperature		Air Bubbles or Headspace (Y or N)
09-25-06	1257	GW	McDaniel Gas Com B	1E MW-1			✓	96347-1													✓				
09-25-06	1232	GW	McDaniel Gas Com B	1E MW-2			✓	-2													✓				
09-25-06	1340	GW	McDaniel Gas Com B	1E MW-3			✓	-3													✓				
09-25-06	1545	GW	Romero Gas Com A	1 MW-3X		✓		-4														✓			
09-26-06	0828	GW	Haney Gas Com B	1E MW-1R	✓			-5													✓				
09-26-06	0920	GW	Haney Gas Com B	1E MW-2			✓	-6													✓				
09-26-06	0928	GW	HaneyGas Com B	1E MW-4			✓	-7													✓				
09-26-06	1302	GW	Stedje Gas Com 1	MW-3R			✓	-8													✓				
09-26-06	1220	GW	Stedje Gas Com 1	MW-2			✓	-9													✓				
09-26-06	1254	GW	Stedje Gas Com 1	MW-1			✓	-10													✓				
09-25-06	0700	water	25092006TB01				✓	-11													✓				

Remarks:

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
09-27-06	10:30	Ashley L. Ager	[signature] 9/27/06
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 15:57

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Dec-06*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0612120

Lab ID: 0612120-07
~~**Client Sample ID:** OH Randel 7 MW-4~~
Collection Date: 12/5/2006 1:03:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/12/2006 4:06:20 AM
Toluene	ND	1.0		µg/L	1	12/12/2006 4:06:20 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2006 4:06:20 AM
Xylenes, Total	ND	3.0		µg/L	1	12/12/2006 4:06:20 AM
Surr: 4-Bromofluorobenzene	81.4	70.2-105		%REC	1	12/12/2006 4:06:20 AM

Lab ID: 0612120-08
Client Sample ID: McDaniel Gas Com BIE MW-1
Collection Date: 12/5/2006 2:13:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/12/2006 4:36:26 AM
Toluene	ND	1.0		µg/L	1	12/12/2006 4:36:26 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2006 4:36:26 AM
Xylenes, Total	ND	3.0		µg/L	1	12/12/2006 4:36:26 AM
Surr: 4-Bromofluorobenzene	79.5	70.2-105		%REC	1	12/12/2006 4:36:26 AM

Lab ID: 0612120-09
Client Sample ID: McDaniel Gas Com BIE MW-2
Collection Date: 12/5/2006 3:10:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/12/2006 5:06:30 AM
Toluene	ND	1.0		µg/L	1	12/12/2006 5:06:30 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2006 5:06:30 AM
Xylenes, Total	ND	3.0		µg/L	1	12/12/2006 5:06:30 AM
Surr: 4-Bromofluorobenzene	79.2	70.2-105		%REC	1	12/12/2006 5:06:30 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Dec-06*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0612120

Lab ID: 0612120-10 **Collection Date:** 12/5/2006 3:17:00 PM
Client Sample ID: McDaniel Gas Com BIE MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/13/2006 10:27:09 AM
Toluene	ND	1.0		µg/L	1	12/13/2006 10:27:09 AM
Ethylbenzene	ND	1.0		µg/L	1	12/13/2006 10:27:09 AM
Xylenes, Total	ND	3.0		µg/L	1	12/13/2006 10:27:09 AM
Surr: 4-Bromofluorobenzene	81.2	70.2-105		%REC	1	12/13/2006 10:27:09 AM

Lab ID: 0612120-11 **Collection Date:**
Client Sample ID: 0512 2006 TBO1 **Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/13/2006 10:57:15 AM
Toluene	ND	1.0		µg/L	1	12/13/2006 10:57:15 AM
Ethylbenzene	ND	1.0		µg/L	1	12/13/2006 10:57:15 AM
Xylenes, Total	ND	3.0		µg/L	1	12/13/2006 10:57:15 AM
Surr: 4-Bromofluorobenzene	79.9	70.2-105		%REC	1	12/13/2006 10:57:15 AM

Lab ID: 0612120-12 **Collection Date:** 12/5/2006 3:50:00 PM
~~**Client Sample ID:** Sullivan Gas Com DI MW-1R~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/14/2006 3:14:42 PM
Toluene	ND	1.0		µg/L	1	12/14/2006 3:14:42 PM
Ethylbenzene	ND	1.0		µg/L	1	12/14/2006 3:14:42 PM
Xylenes, Total	ND	3.0		µg/L	1	12/14/2006 3:14:42 PM
Surr: 4-Bromofluorobenzene	80.5	70.2-105		%REC	1	12/14/2006 3:14:42 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Ground Water
Work Order: 0612120

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 0612120-02A MSD		*MSD*			Batch ID:	R21754	Analysis Date:	12/12/2006 1:36:12 AM	
Benzene	17.92	µg/L	1.0	87.5	85.9	113	6.25	27	
Toluene	17.88	µg/L	1.0	87.7	86.4	113	4.33	19	
Ethylbenzene	17.30	µg/L	1.0	86.5	83.5	118	4.82	10	
Xylenes, Total	51.71	µg/L	3.0	86.2	83.4	122	4.61	13	
Sample ID: b 15		*MBLK*			Batch ID:	R21754	Analysis Date:	12/11/2006 3:54:38 PM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R21800	Analysis Date:	12/13/2006 8:26:25 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R21831	Analysis Date:	12/14/2006 8:42:55 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS II		*LCS*			Batch ID:	R21754	Analysis Date:	12/12/2006 2:06:12 AM	
Benzene	18.26	µg/L	1.0	90.3	85.9	113			
Toluene	18.31	µg/L	1.0	91.6	86.4	113			
Ethylbenzene	17.98	µg/L	1.0	89.9	83.5	118			
Xylenes, Total	53.73	µg/L	3.0	89.6	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	R21800	Analysis Date:	12/13/2006 4:33:03 PM	
Benzene	18.09	µg/L	1.0	90.4	85.9	113			
Toluene	17.99	µg/L	1.0	89.9	86.4	113			
Ethylbenzene	17.55	µg/L	1.0	87.7	83.5	118			
Xylenes, Total	52.58	µg/L	3.0	87.6	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	R21831	Analysis Date:	12/14/2006 7:50:29 PM	
Benzene	17.78	µg/L	1.0	88.9	85.9	113			
Toluene	17.85	µg/L	1.0	89.2	86.4	113			
Ethylbenzene	17.33	µg/L	1.0	86.6	83.5	118			
Xylenes, Total	52.15	µg/L	3.0	86.9	83.4	122			
Sample ID: 0612120-02A MS		*MS*			Batch ID:	R21754	Analysis Date:	12/12/2006 1:06:08 AM	
Benzene	19.07	µg/L	1.0	93.3	85.9	113			
Toluene	18.68	µg/L	1.0	91.7	86.4	113			
Ethylbenzene	18.16	µg/L	1.0	90.8	83.5	118			
Xylenes, Total	54.15	µg/L	3.0	90.2	83.4	122			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date and Time Received: 12/8/2006

Work Order Number 0612120 | Received by TLS

Checklist completed by [signature] Signature [date] Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 2° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☒ Level 4 ☐
Other:

Client: XTO Energy
Kim Champlin

Address: 2700 Farmington Blvd
Bldg 1, Ste K
Farmington, NM

Phone #: 505 566 7954

Fax #:

Project Name: Ground Water

Project #:

Project Manager: Lisa Winn

Sampler: Ashley Ager

Sample Temperature: 0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No. 0612120	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 B BTEX					Air Bubbles or Headspace (Y or N)
12-5-06	0950	GW	Jack Frost B2	MW-4	✓			1													✓					
12-5-06	1125	GW	Jack Frost B2	MW-3	✓			2													✓					
12-5-06	1058	GW	Jack Frost B2	MW-2R	✓			3													✓					
12-5-06	1138	GW	Jack Frost B2	MW-1	✓			4													✓					
12-5-06	1308	GW	OH Randel 7	MW-5	✓			5													✓					
12-5-06	1238	GW	OH Randel 7	MW-3	✓			6													✓					
12-5-06	1303	GW	OH Randel 7	MW-4	✓			7													✓					
12-5-06	1413	GW	McDaniel Gas Com	BIE MW-1	✓			8													✓					
12-5-06	1510	GW	McDaniel Gas Com	BIE MW-2	✓			9													✓					
12-5-06	1517	GW	McDaniel Gas Com	BIE MW-3	✓			10													✓					
12-5-06	0700	GW	0512 2006 TB01	TRIP Blank	✓			11													✓					
12-5-06	1550	GW	Sullivan Gas Com	DI MW-1R	✓			12													✓					

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
12-7-06	1500	Ashley Ager	12/8/06 780
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:
* Please copy results to ala@lodestarservices.com

BO 191

Form 3160-5
June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE

7. If Unit or (CA) Agreement Designation
SW27

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
McDANIEL GC B 1E

2. Name of Operator
Amoco Production Company

9. API Well No.
3004523855

3. Address and Telephone No.
200 Amoco Court, Farmington, N.M. 87401 Tel: (505) 326-9200

10. Field and Pool, or Exploratory Area
DAKOTA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SE/4 NW/4, SEC. 26, T 29 N, R 10 W, NMPM

11. County or Parish, State
SAN JUAN, NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Pit closure	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Pit closure verification - see attached documentation.

DEHYDRATOR PIT - ABANDONED, GROUNDWATER IMPACTED.
SF 2/14/00

14. I hereby certify that the foregoing is true and correct
Signed RA Shaw Title ENVIRO. COORDINATOR Date 12/30/94

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

BO 191

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name McDANIEL GC B 1E

Location: Unit or Qtr/Qtr Sec F Sec 26 T 29N R 10W County SAN JUAN

Pit Type: Separator ___ Dehydrator X Other ___

Land Type: BLM ___, State ___, Fee ___, Other COM. AGMT.

Pit Location: (Attach diagram)
Pit dimensions: length 20', width 23', depth 4'
Reference: wellhead X, other ___
Footage from reference: 110'
Direction from reference: 32 Degrees X East North ___ of ___ West South X

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	20
	RANKING SCORE (TOTAL POINTS):	40

B0191

Date Remediation Started: _____ **Date Completed:** 12/30/94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 50

Landfarmed X Insitu Bioremediation ___

Other _____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite ~~X~~ Offsite X BACA GC A #1A, (F-26-29-10)

General Description Of Remedial Action: Excavation GROUNDWATER PUMPED & HAULED. LANDFARM SOIL MIXED WITH BACA GC A #1A - REFER TO BACA GC A #1A FOR LANDFARM CLOSURE INFORMATION.

Ground Water Encountered: No ___ Yes X Depth 3'

Final Pit:
Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents MULTIPLE SAMPLES

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

Ground Water Sample: Yes X No ___ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 12/30/94

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw ENVIRONMENTAL COORDINATOR

RE0

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: 80191 2329
C.O.C. NO: 2563

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: McDANIEL GC WELL #: 8 1E PIT: DEH4
QUAD/UNIT: F SEC: 26 TWP: 29N RNG: 10W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SE/4 NW/4 CONTRACTOR: P. VELASQUEZ

DATE STARTED: 12/15/94
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 20 FT. x 23 FT. x 4 FT. DEEP. CUBIC YARDAGE: 50
~~BACA GC A #1A~~ (F-26-29-10)
DISPOSAL FACILITY: ~~ON SITE~~ REMEDIATION METHOD: LANDFARMED
LAND USE: RANGE LEASE: - FORMATION: DK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 110 FT. 5326 FROM WELLHEAD.
DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: <200'
NMOCD RANKING SCORE: 40 NMOCD TPH CLOSURE STD: 100 PPM

CHECK ONE:
✓ PIT ABANDONED
___ STEEL TANK INSTALLED

SOIL AND EXCAVATION DESCRIPTION:

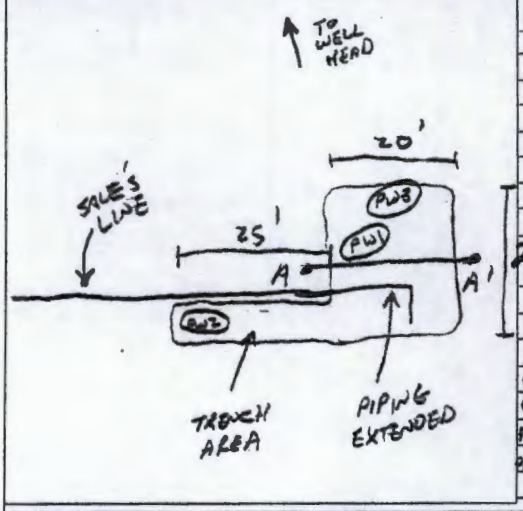
COLLECTED WATER SAMPLE ONLY. NO APPARENT HC ODOR IN SAMPLE CONTAINER OR VISIBLE INDICATION. SLIGHT SHEEN IN GROUNDWATER OBSERVED IN TRENCH AREA. UNABLE TO COLLECT SOIL SAMPLE(S) FROM ANY SIDEWALLS. GROUNDWATER PUMPED BY TRIPLE S & HAULED.

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE
0 FT

PIT PERIMETER



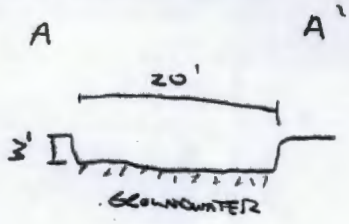
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	
2	
3	
4	
5	

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	
PW1 @GW (3')	BTEX	1420	12/15 FAILED
PW2 @GW (3')	BTEX	0925	12/26 FAILED
PW3 @GW (3)	BTEX	1400	12/28 PASSED

PIT PROFILE



TRAVEL NOTES: CALLOUT: 12/14/94 ONSITE: 12/15/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Nelson Velez	Date:	12/16/94
Company:	Blagg Engineering	Lab ID:	2329
Address:	P.O. Box 87	Sample ID:	4403
City, State:	Bloomfield, NM 87413	Job No.	2-1000

Project Name:	McDaniel GC B 1 E				
Project Location:	PW 1 @ GW (3') - Dehy Pit				
Sampled by:	NV	Date:	12/15/94	Time:	14:20
Analyzed by:	DLA	Date:	12/16/94		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	130.9	0.2
Toluene	84.4	0.2
Ethylbenzene	30.7	0.2
m,p-Xylene	284.6	0.2
o-Xylene	53.7	0.2
	TOTAL 584.4 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: DaG

Date: 12/19/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Nelson Velez	Date:	12/22/94
Company:	Blagg Engineering	Lab ID:	2563
Address:	P.O. Box 87	Sample ID:	4480
City, State:	Bloomfield, NM 87413	Job No.	2-1000

Project Name:	McDaniel GC B 1 E				
Project Location:	PW 2 @ GW (3') - Dehy Pit				
Sampled by:	NV	Date:	12/21/94	Time:	9:25
Analyzed by:	DLA	Date:	12/22/94		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	112.6	0.2
Toluene	36.1	0.2
Ethylbenzene	24.0	0.2
m,p-Xylene	308.8	0.2
o-Xylene	57.4	0.2
TOTAL	539.0 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: DaLt

Date: 12/22/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Nelson Velez	Date:	12/30/94
Company:	Blagg Engineering	Lab ID:	2515
Address:	P.O. Box 87	Sample ID:	4550
City, State:	Bloomfield, NM 87413	Job No.	2-1000

Project Name:	McDaniel GC B 1 E				
Project Location:	PW 3 @ GW (3') - Dehy Pit				
Sampled by:	NV	Date:	12/28/94	Time:	14:00
Analyzed by:	DLA	Date:	12/30/94		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	0.8	0.2
Toluene	0.5	0.2
Ethylbenzene	0.3	0.2
m,p-Xylene	4.2	0.2
o-Xylene	0.8	0.2
TOTAL	6.7 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by:
Date: 12/30/94

CHAIN OF CUSTODY RECORD

2329

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/15/94

Page 1 of 1

BO191

Purchase Order No.: | Reference No.:

SEND INVOICE TO
Name:
Company: BLAGG ENGINEERING | Dept.:
Address: P.O. BOX 87
City, State, Zip: BLOOMFIELD, NM 87413

REPORT RESULTS TO
Name: NELSON VELEZ | Title: PG
Company: SAME
Mailing Address: SAME
City, State, Zip: SAME
Telephone No.: 632-1199 | Telefax No.:

Special Instructions:
McDANIEL GC B1E

Sampler: Nelson Velez

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE/ GRAB	PRESERVATIVES	Number of Containers	BTEX (8020)	4403-2329	Remarks (matrix)
PW 1 C Gun (3')-DEHY PIT	12/15/94 1420	GRAB	HgCl	2	✓		WATER

Relinquished by: Nelson Velez	Date/Time 12/16/94 0749	Received by: Alan J. Cisneros	Date/Time 12/16/94 0749
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	5 Working Days	10 Working Days	Sampling Location:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

CHAIN OF CUSTODY RECORD

2563

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/21/94

Page 1 of 1

BO 191

Purchase Order No.: | Job No.

SEND INVOICE TO
Name
Company BLAGG ENGINEERING | Dept.
Address P.O. BOX 87
City, State, Zip BLOOMFIELD, NM 87413

REPORT RESULTS TO
Name NELSON VELEZ | Title PE
Company SAME
Mailing Address SAME
City, State, Zip SAME
Telephone No. 632-1199 | Telefax No.

Sampling Location: McDANIEL GC B1E

Sampler: Nelson Vely

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX (8020)	LAB ID
PW2 @ GW (3') - DEHY PIT	12/21/94	0925	WATER	HgCl	2	✓	4420-25691

Relinquished by: Nelson Vely	Date/Time 12/21/94 1337	Received by: Lisa L. Quinn	Date/Time 12/21/94 1337
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

CHAIN OF CUSTODY RECORD

2515

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/28/94

Page 1 of 1

B0191

Purchase Order No.:		Job No.	
SEND INVOICE TO	Name		
	Company	BLAGG ENGINEERING	Dept.
	Address	P. O. BOX 87	
	City, State, Zip	BLOOMFIELD, NM 87413	
REPORT RESULTS TO	Name	NELSON VELEZ	Title PG
	Company	SAME	
	Mailing Address	SAME	
	City, State, Zip	SAME	
	Telephone No.	632-1199	Telefax No.

Sampling Location: McDANIEL GC B1E

Sampler: Nelson Vélez

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED: BTEX (8020)	LAB ID
PW3 @ GW (3') - DEHY PIT	12/28/94	1400	WATER	HgCl	2	✓	4550-2515

Relinquished by: Nelson Vélez	Date/Time 12/29/94 1438	Received by: Sheri L. Greene	Date/Time 12/29/94 14:38
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client